

(43) International Publication Date 4 January 2001 (04.01.2001)

PCT

(10) International Publication Number WO 01/01669 A1

(51) International Patent Classification⁷: G06F 17/60

H04N 1/00,

(21) International Application Number: PCT/JP00/04281

(22) International Filing Date: 29 June 2000 (29.06.2000)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

11/182936 11/353865 29 June 1999 (29.06.1999) JP 14 December 1999 (14.12.1999) JP

(71) Applicant (for all designated States except US): CA-SIO COMPUTER CO., LTD. [JP/JP]; 6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo 151-8543 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): NIMURA, Wataru [JP/JP]; 7-1-308, Chigasemachi 1-chome, Ome-shi, Tokyo 198-0043 (JP). MIZUSHINA, Takahiro [JP/JP]; 5-3,

Isehara-cho 5-chome, Kawagoe-shi, Saitama 350-1108 (JP). TAKAHASHI, Hiroki [JP/JP]; 23-4, Kabemachi 6-chome, Ome-shi, Tokyo 198-0036 (JP). KASAHARA, Takeshi [JP/JP]; 34-8-605, Musashinodai 2-chome, Fussa-shi, Tokyo 197-0013 (JP). MIZUNO, Kimiyasu [JP/JP]; 12-8-203, Kitadenen 2-chome, Fussa-shi, Tokyo 197-0005 (JP).

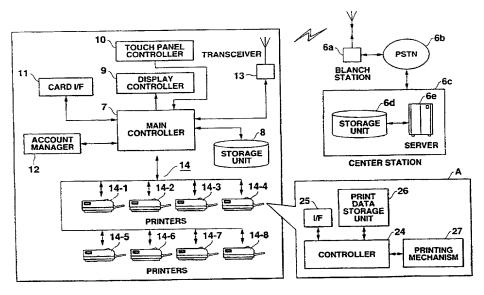
- (74) Agent: KOMIZO, Satoshi; Kyohan Building, 7th floor, 7, Kandanishiki-cho 2-chome, Chiyoda-ku, Tokyo 101-0054
- (81) Designated States (national): CN, KR, US.
- (84) Designated States (regional): European patent (DE, FR, GB, IT).

Published:

With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PRINTING APPARATUS AND PRINTING METHOD



(57) Abstract: A card I/F (11) accepts a recording medium such as a flash memory card storing digital image data. A main controller (7) reads the image data from the recording medium in the card I/F (11). A touch panel controller (10) informs the main controller (7) of unit images designated by a user. The main controller sequentially supplies the designated unit image information and relating image data to 8 printers (14-1 to 14-8) to instruct them to print the images. The printers (14-1 to 14-8) print the designated unit image information for designated quantities. In a case where the user selects free printing through the touch panel controller (10), the main controller (7) synthesizes the designated unit image information with an advertisement image stored in a storage unit (8), and supplies resultant image data to the printers (14-1 to 14-8).

A 971/11669 A

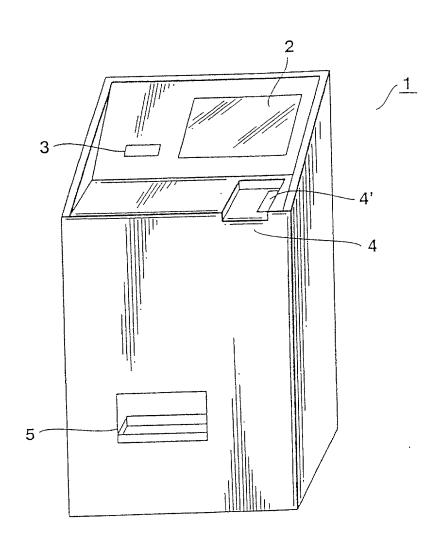


FIG.1

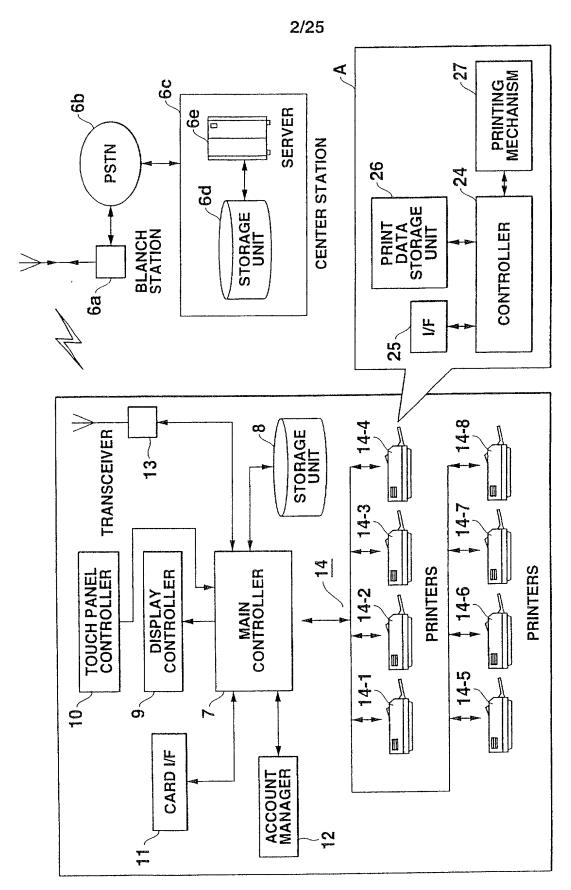


FIG.2

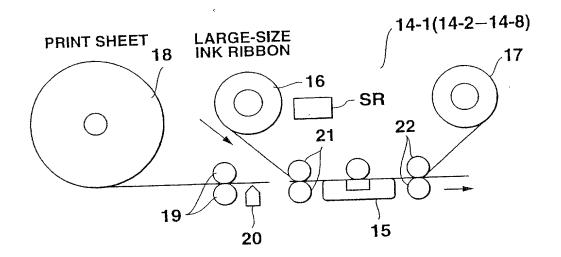


FIG.3

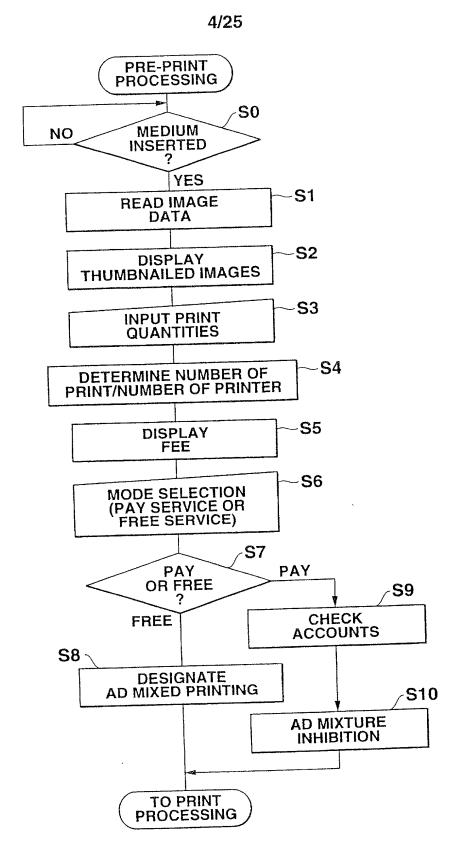


FIG.4

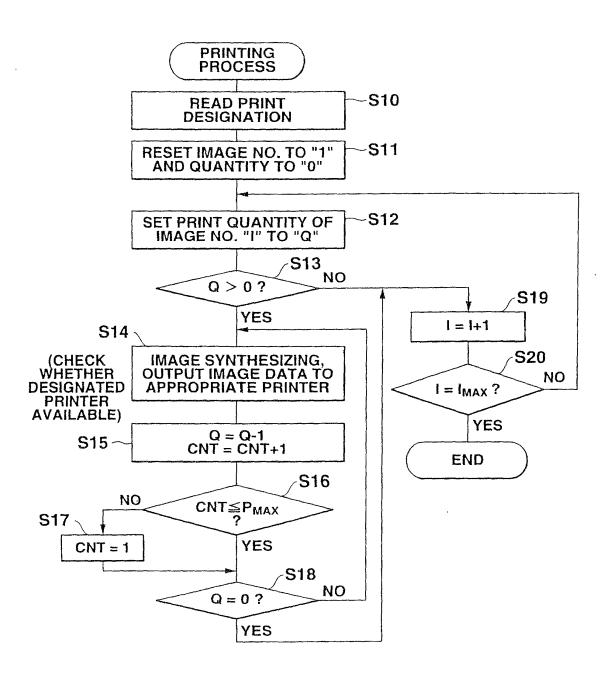


FIG.5

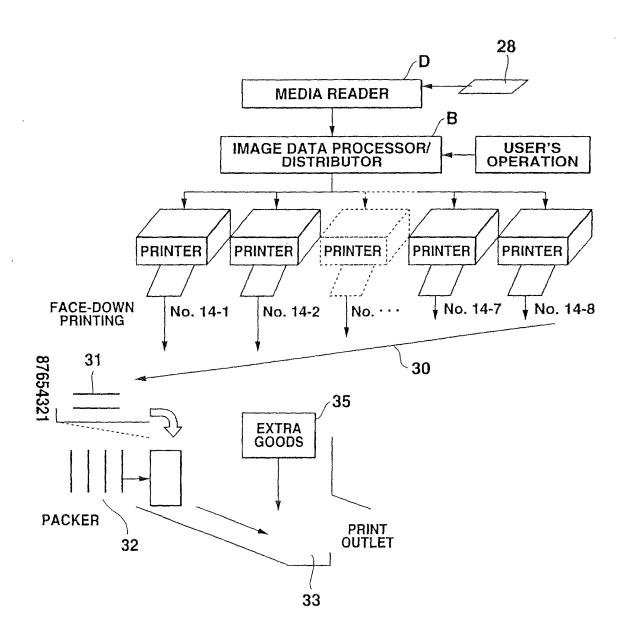
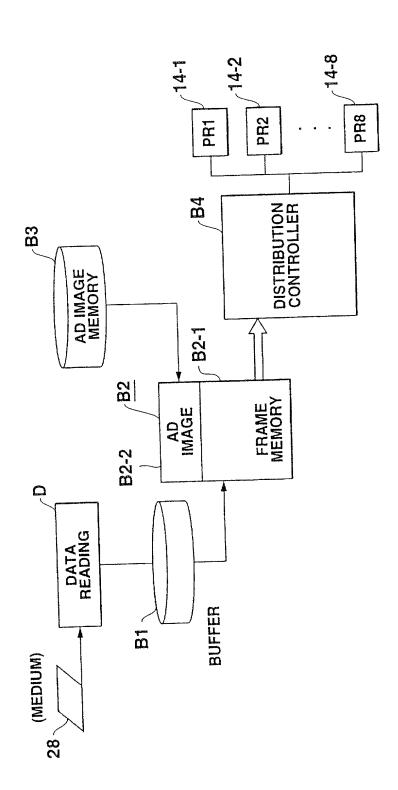


FIG.6



E C

IMAGE No. (1)

: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

PRINT QUANTITY (Q) : 1, 1, 1, 1, 1, 2, 1, 2, 1, 3

TOTAL 14

DESIGNATED QUANTITY (N) : (14)

AVAILABLE PRINTERS (PMAX): (8)

COUNTER (CNT)

FIG.8

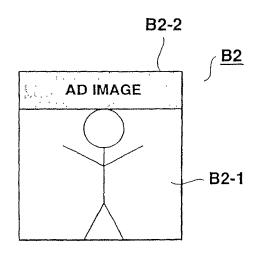


FIG.9

9/25

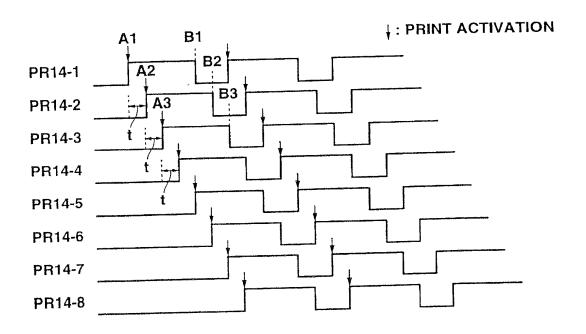
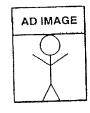
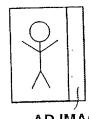
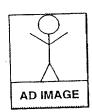


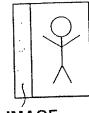
FIG.10

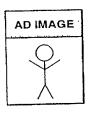
AD IMAGE SYNTHESIZING (ARRANGEMENT)











AD IMAGE

AD IMAGE

SIZE REDUCED

FIG.11A FIG.11B FIG.11C FIG.11D FIG.11E

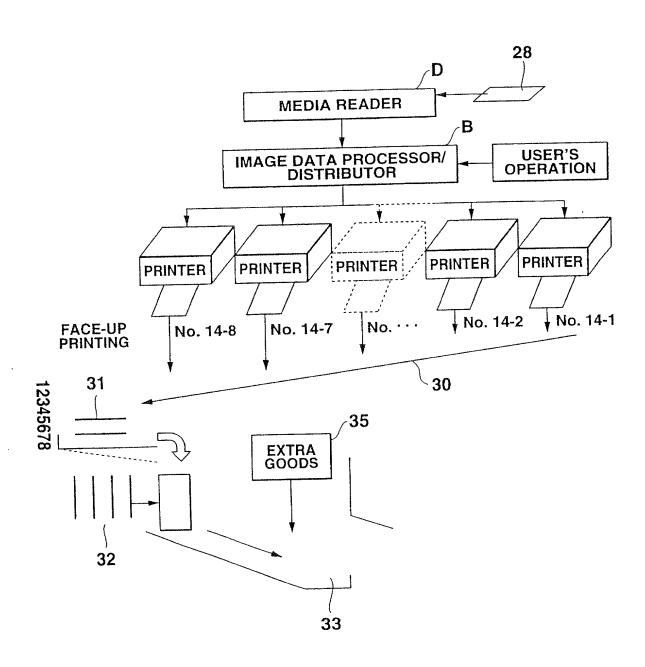


FIG.12

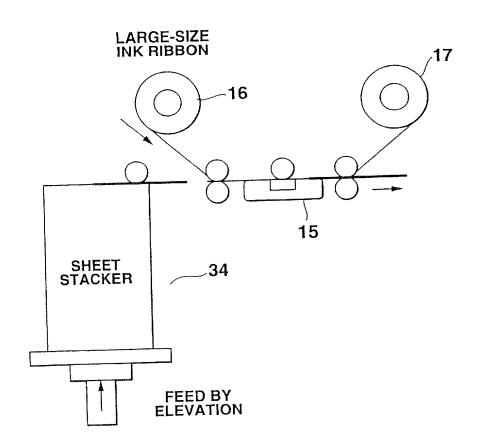


FIG.13

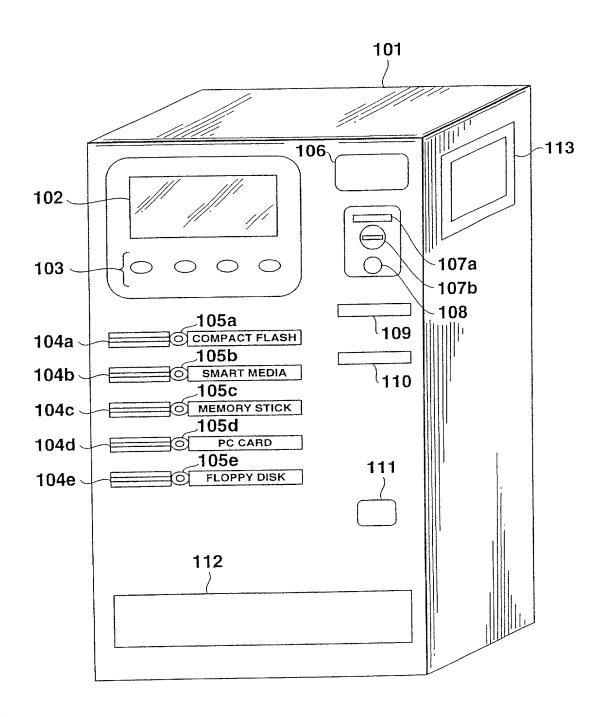
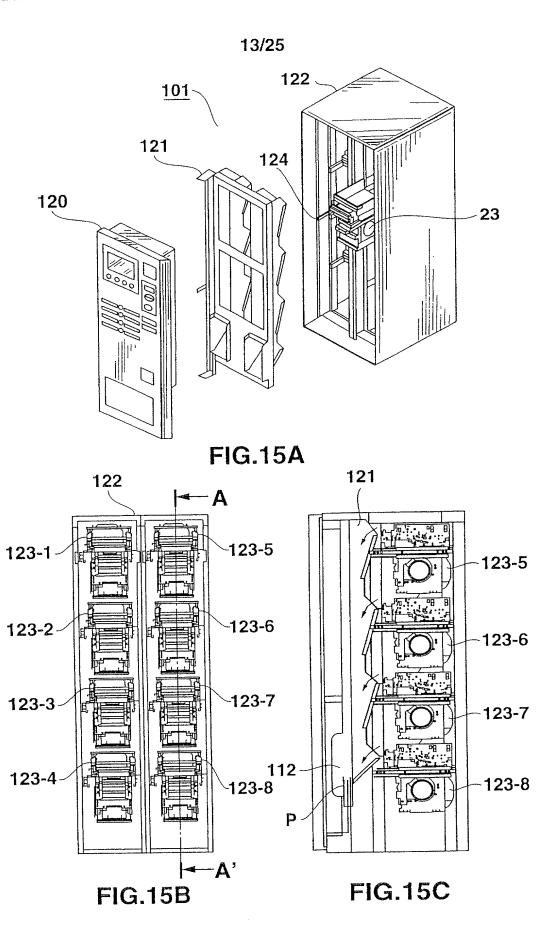


FIG.14



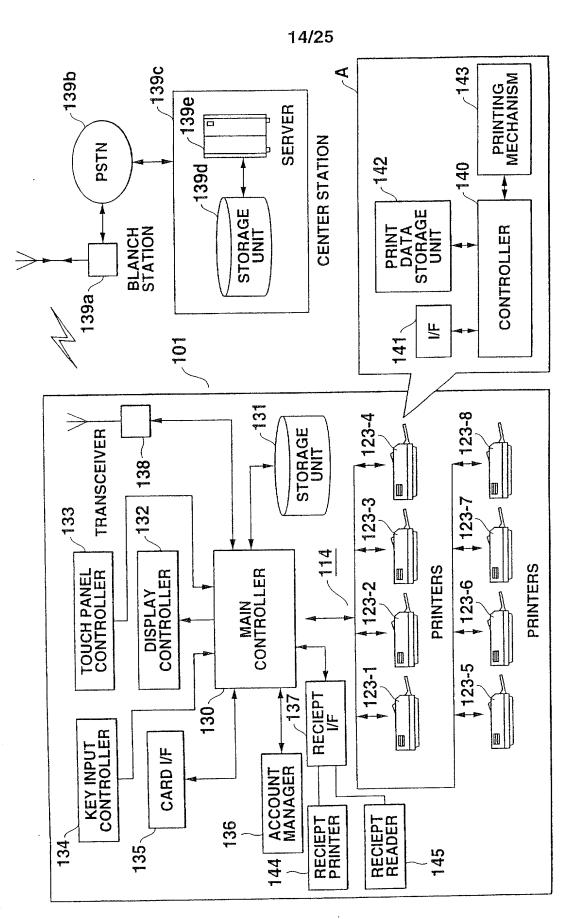


FIG. 16

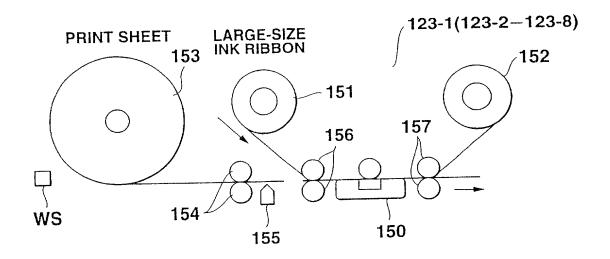


FIG.17

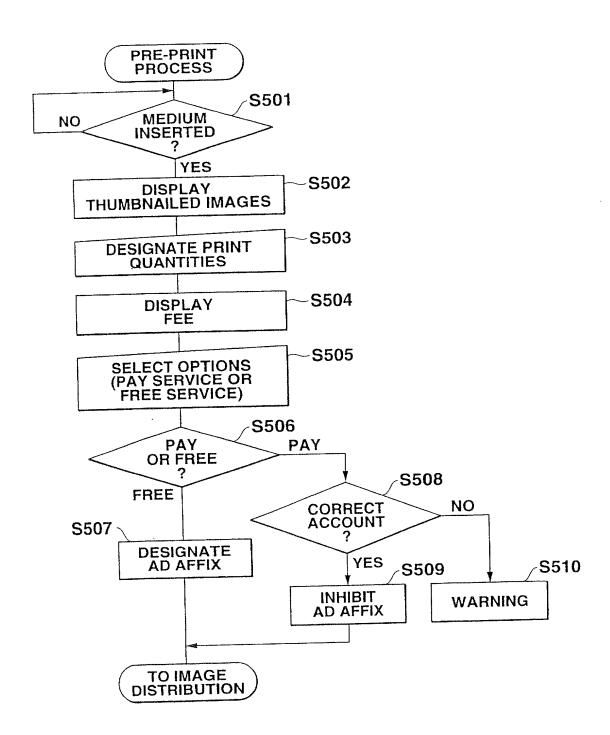


FIG.18

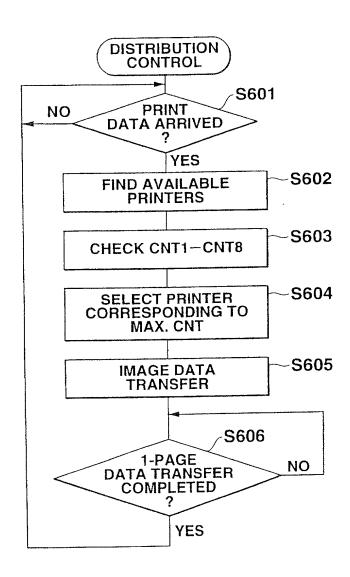


FIG.19

18/25

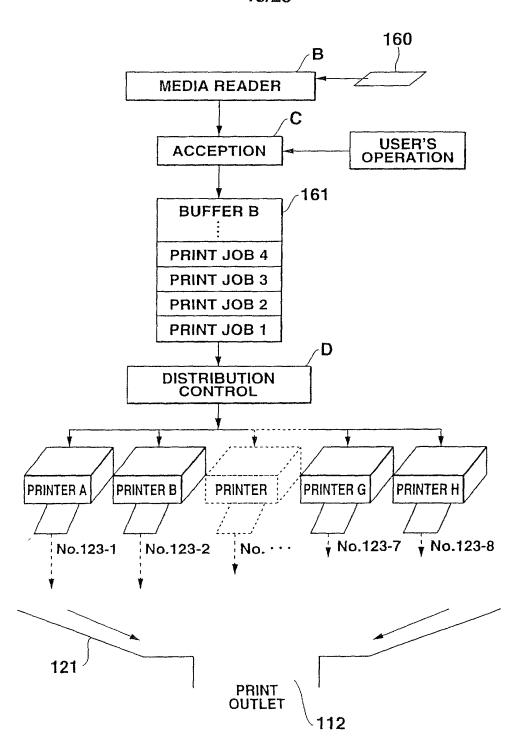
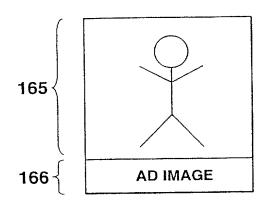


FIG.20



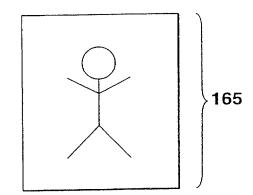


FIG.21A

FIG.21B

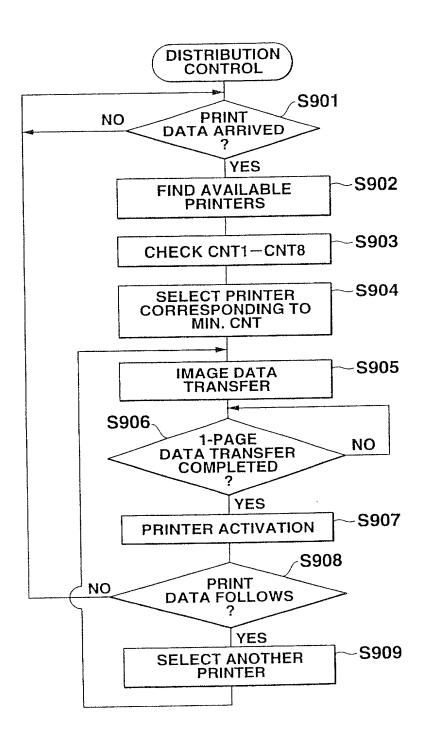


FIG.22

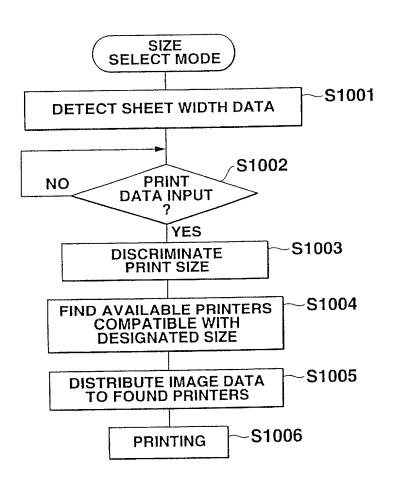


FIG.23

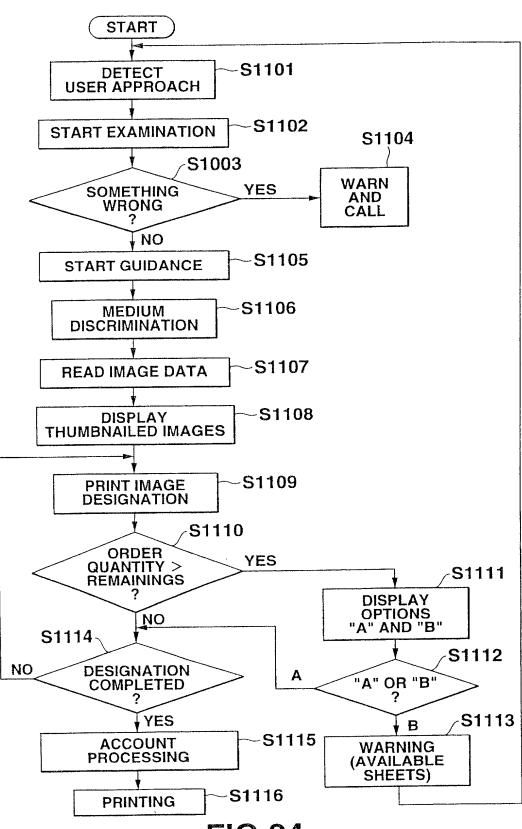


FIG.24

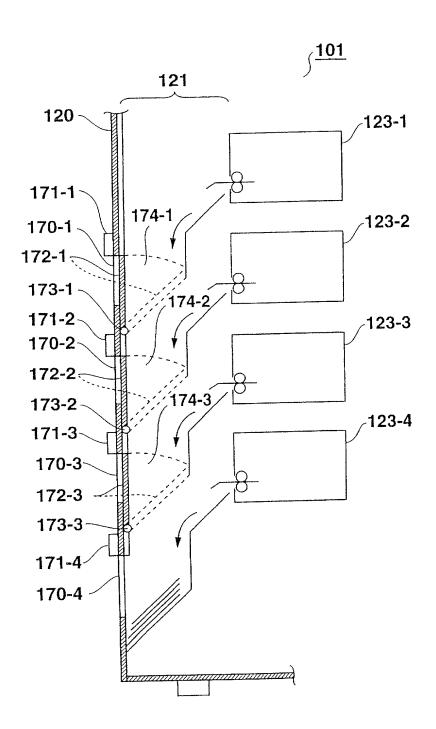


FIG.25

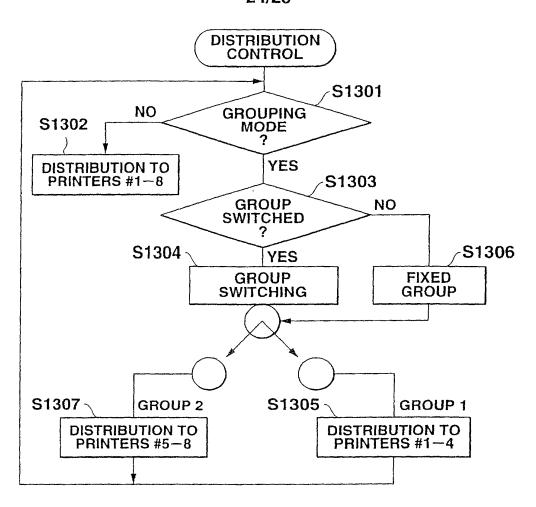


FIG.26

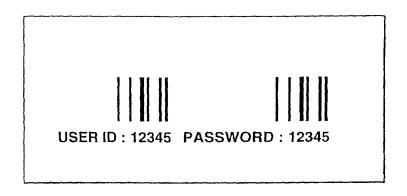
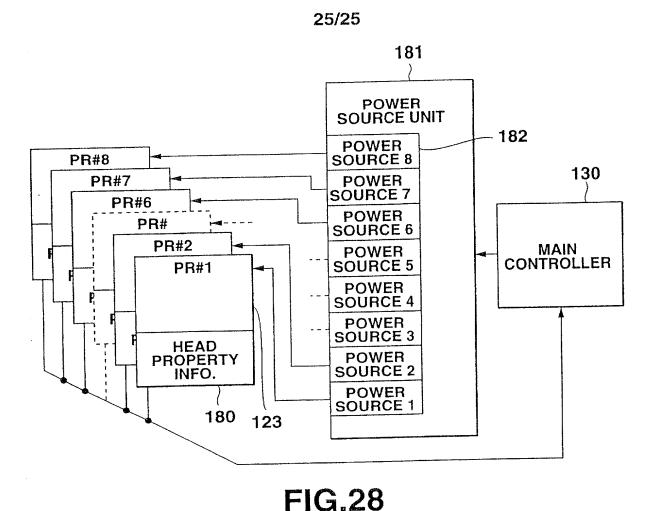
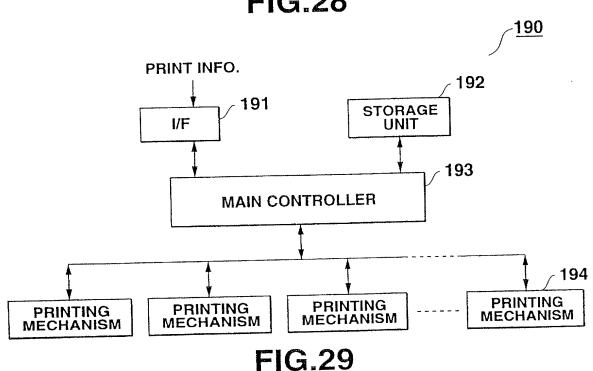


FIG.27





APPLICATION FOR UNITED STATES LETTERS PATENT

PCT Declaration and Power of Attorney (35 U.S.C. 371(c)(4)) PCT Application - United States Designated Office

As a below named inventor, I declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PRINTING APPARATUS AND PRINTING METHOD

described and claimed in International Application number PCT/JP00/04281 and, if it was amended, as amended on

filed June 29, 2000

I have reviewed and understand the contents of said specification, including claims.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56.

I claim priority benefits under 35 USC §119 of: (i) any foreign application(s) for patent or inventor's certificate listed below; or (ii) any United States provisional application(s) listed below; and have also identified below any foreign application(s) for patent or inventor's certificate, or PCT international application having a filing date before that of the application(s) on which priority is claimed.

COUNTRY	APPLICATION NUMBER	DATE (day, month, year)	PRIORITY CLAIMED
JAPAN	11-182936	29, 06, 1999	yes_X_ no
JAPAN	11-353865	14, 12, 1999	yes X no
			yes no
			yes no

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I appoint the following attorneys to prosecute this application and to transact all business in the U.S. Patent & Trademark Office connected therewith: Stephen H. Frishauf, Reg. No. 16,233; Leonard Holtz, Reg. No. 22,974; Herbert Goodman, Reg. No. 17,081; Thomas Langer, Reg. No. 27,264; Marshall J. Chick, Reg. No. 26,853; Walter J. Baum, Reg. No. 20,641; Richard S. Barth, Reg. No. 28,180; Douglas Holtz, Reg. No. 33,902; and Robert P. Michal, Reg. No. 35,614.

CORRESPONDENCE AND CALLS TO:

FRISHAUF, HOLTZ, GOODMAN, LANGER & CHICK, P.C. 767 Third Avenue - 25th Floor Tel.: (212) 319-4900

New York, New York 10017-2023

Fax.: (212) 319-5101

INVENTOR: SIGNATURE

DATE

RESIDENCE AND POST OFFICE ADDRESS

INVENTOR: SIGNATURE	DATE	RESIDENCE AND POST OFFICE ADDRESS
Sign: Wataru Nimura Type: Wataru NIMURA	Date: January 17, 2001 Citizen of: JAPAN	Residence: (City & Country) Tokyo, JAPAN Post Office Address: 7-1-308, Chigasemachi 1-chome, Ome-shi, Tokyo 198-0043, JAPAN
Sign: Takahiro Mizushima Type: Takahiro MIZUSHINA	Date: January 17, 2001 Citizen of: JAPAN	Residence: (City & Country) Saitama, JAPAN Post Office Address: 5-3, Isehara-cho 5-chome, Kawagoe-shi, Saitama 350-1108, JAPAN
Sign: Wiroki Jakahadhi Type: Hiroki TAKAHASHI	Date: January 17, 2001 Cilizen of: JAPAN	Residence: (City & Country) Tokyo, JAPAN Post Office Address: 23-4, Kabemachi 6-chome, Ome-shi, Tokyo 198-0036, JAPAN

1,00

3-00

APPLICATION FOR UNITED STATES LETTERS PATENT

Declaration and Power of Attorney

INVENTOR:SIGNATURE	DATE	RESIDENCE AND POST OFFICE ADDRESS
	Date:	Residence (City & Country):
Sign:	January 17,	Tokyo, JAPAN
Takeshi Kasahara	2001	Post Office Address:
Type:	Citizen of:	34-8-605, Musashinodai 2-chome, Fussa-shi, Tokyo 197-0013, JAPAN
Takeshi KASAHARA	JAPAN	Fussa-sill, longo 197-0010, on raiv
		Residence (City & Country):
Sign:	January 17,	Tolsyo IAPAN
	2001	Post Office Address:
Kimiyasu mizuno		12-8-203, Kitadenen 2-chome,
Type:	Citizen of:	Fussa-shi, Tokyo 197-0005, JAPAN
Kımiyasu MIZUNO	JAPAN	
	Date:	Residence (City & Country):
Sign:	Jan.	
		Post Office Address:
Type:	Citizen of:	1
.,,		
		Residence (City & Country):
Sign:	Date:	
		Post Office Address:
		-
Type:	Citizen of:	
Sign:	Date:	Residence (City & Country):
Juga.		
		Post Office Address:
Type:	Citizen of:	7
.36		
		Residence (City & Country):
Sign:	Date:	
		Post Office Address:
		_
Туре:	Citizen of:	
Siam.	Date:	Residence (City & Country):
Sign:		
		Post Office Address:
Type:	Citizen of:	
1790.		
		Residence (City & Country):
Sign:	Date:	
		Post Office Address:
		- Cost Office Flagrand
Type:	Citizen of:	